DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-002267 Address: 333 Burma Road **Date Inspected:** 05-May-2008

City: Oakland, CA 94607

OSM Arrival Time: 1500 **Project Name:** SAS Superstructure **OSM Departure Time:** 2230 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai China

CWI Name: See Below in Items Observed **CWI Present:** Yes No **Inspected CWI report:** Yes No N/A **Rod Oven in Use:** Yes No N/A Yes N/A N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS: Delayed / Cancelled:** Yes No N/A

34-0006 **Bridge No: Component: OBG** and Tower Components

Summary of Items Observed:

Caltrans Quality Assurance Inspector Mr. David Kelsey (Caltrans QA Inspector) arrived at Shanghai Zhenhua Port Machinery Co (ZPMC) to observe the ZPMC Quality Control Inspectors noted below perform the duties and responsibilities as outlined in the Welding Quality Control Plan (WQCP), Contract Special Provisions and to randomly inspect the in-process welding fabrication at ZPMC fabrication facility for the Orthotropic Box Girder (OBG) and Tower bridge structural components.

The Caltrans QA Inspector performed in-process visual inspection on the Shielded Metal Arc Welding (SMAW) process tack welding & fit-up on WT Stiffeners to the OBG bottom plates BP141-001 & BP060-001 in Bay#3. QA Inspector randomly observed the ZPMC CWI Mr. Wu Ming Kat monitoring welding voltage, pre-heat & interpass temperatures & cleaning, weld pass width, profile/size and travel speed per approved WPS-B-P- 2112.

The Caltrans QA Inspector performed in-process visual inspection on the Submerged Arc Welding (SAW) process welding on Tower Diaphragm plate WSDI SA238 A/B-3A to -3B weld splice in Bay# 4. QA Inspector randomly observed the ZPMC QC/CWI Mr. Zhao Chem Sun (07072091) and two CAWI monitoring welding voltage, pre-heat & interpass temperatures & cleaning, weld pass width, profile/size and travel speed per approved WPS-B-T-3221-B-U3c-S-1.

The Caltrans QA Inspector observed fitting-up of various OBG floor beams in Bay# 7.

The Caltrans Inspector observed weld root thermal air carbon back-gouging in progress on OBG bottom plate weld splices BP169-001 & BP061-001 in Bay# 3.

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The Caltrans QA Inspector performed Ultrasonic Testing (UT) verification of the QC UT Inspected and accepted welds on Bay#1 and Tower Bay#2. QA Inspector's visual and UT verification appears to comply with AWS D1. 5-02 section 6, table 6.3. Reference QA Ultrasonic Test Report TL-6027 dated 5/5/08 for specific test data.

The in-process welding, fit-up & joint preparation, and back-gouging observed by the Caltrans Inspector appears to comply with previously mentioned WPS, the approved drawings, the WQCP, Contract Special Provisions and AWS welding code D1.5. See attached pictures below in numeric order from left to right.





Item **Description WBS** Dwg No. **Status**

- Fitting & SMAW tack welding of WT stiffeners to the OBG bottom plate BP141-001
- 2 SAW welding of the tower diaphrame plate WSDI SA238 A/B -3B weld joint.

Summary of Conversations:

General information conversations only to do with the previously mentioned work.

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Kelsey,David	Quality Assurance Inspector
Reviewed By:	Cochran,Jim	QA Reviewer